

ABSTRACT

Embodiments of the present invention described and shown in the specification and drawings include a combination responsive to an acoustic wave that can be utilized as a dynamic pressure sensor. In one embodiment of the present invention, the combination has a substrate having a first surface and an opposite second surface, a microphone positioned on the first surface of the substrate and having an input and a first output and a second output, wherein the input receives a biased voltage, and the microphone generates an output signal responsive to the acoustic wave between the first output and the second output. The combination further has an amplifier positioned on the first surface of the substrate and having a first input and a second input and an output, wherein the first input of the amplifier is electrically coupled to the first output of the microphone and the second input of the amplifier is electrically coupled to the second output of the microphone for receiving the output signal from the microphone. The amplifier is spaced from the microphone with a separation smaller than 0.5 mm.

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